

Using Science A–Z Projectable Resources

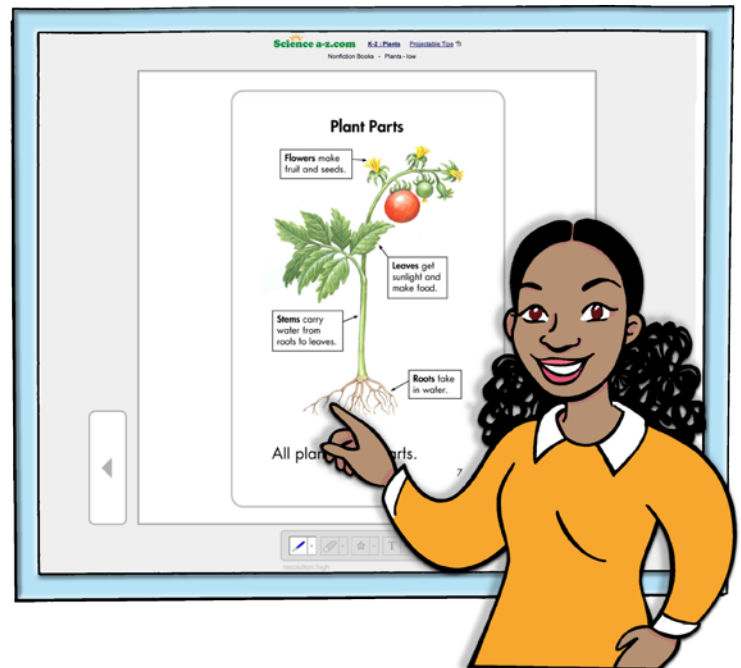
The following teaching tips can be used with Science A–Z projectable resources and tools. The headings below parallel the headings in Science A–Z’s Nonfiction Book Teacher’s Guides that accompany each book. Also included are tips that can be used with the Discussion Cards, Unit Quiz, Process Activities, Quick Reads, and more resources.

Projectable Books

Before Reading

Introduce the Book

- Display the book on the board and read the title, author’s name, illustrator’s name, and so on. As you go through the book, you might cover all the words with the cover tool and allow students to discuss what the book might be about solely on the basis of the illustrations or photographs.
- Flip through the book in 30 seconds and ask students what they notice. What do they think the book will be about?
- Have students make predictions based on a book walk.
- What connections do students make with the title of the book?



Introduce the Vocabulary

- Students can use the drawing pen to draw lines from word to picture, to highlight various sounds presented in the book, to point out words they view as difficult, and to break down each word by sounds or syllables.
- Identify a word. Invite students to use the text tool to write its meaning above the word.
- Use the cover tool to hide a particular word on the page so that the sentence around the word can be read. Ask students to generate a list of words that could fit in the sentence.
- Students can use various word-attack strategies. Work with students to use context clues to decipher meaning, highlight smaller words within difficult-to-read words, and so on.
- Highlight key terms with any color of highlighter and invite students to draw lines connecting each word to the art.



Reading Strategy

- **Ask and answer questions:** Use the pen to underline information that students already know. Stamp question marks next to sentences that students wonder about. Add what students learned to the ends of text statements by using the text tool.
- **Connect to prior knowledge:** Underline or highlight text and have student volunteers write how they used their prior knowledge to connect to the text.
- **Retell:** Cover words on the page with the cover tool and have volunteers retell what they just read.
- **Summarize:** Highlight sections of text to indicate the main idea and details, and invite students to write a summary using that information.
- **Visualize:** Use a page with no picture, or cover the picture with the cover tool, and have students draw what they see in their mind when the page is read to them.

During Reading

Student Reading

- Underline selected text that relates to the strategy or skill.
- Pair the reading with a projectable Science A–Z graphic organizer, and go back and forth between the two. For example, for the skill Compare and Contrast, when students read material in the text that is a comparison, highlight the text and have students write the information on the graphic organizer.
- Have students use the text tool to write their own think-alouds beside the text.
- If students will take turns reading aloud, use the pen, highlighter, or stamps to note when parts change for paired or choral reading. Or, use the framing tool several times to help readers focus on sections of text.

Comprehension Skill

- **Cause and effect:** Highlight some effects in the book. Ask students for possible causes of the effects. Confirm causes as text is read by marking each one with the letter *C*, or by writing the letter *E* to confirm effects.
- **Classify information:** Use the pen or highlighter in different colors to identify the different pieces of information. A chart can be made to go alongside the reading, and students can write the information on the chart.
- **Compare and contrast:** Invite students to color in blue the details that are the same and to color in green the details that are different. Students can add these details to their own Venn diagram.
- **Main idea and details:** Invite students to highlight or underline a main idea in one color and to highlight or underline details in another.
- **Inference:** Highlight text that supports students as they make an inference. Invite students to write what they inferred by using the text tool.
- **Other skills:** Use the projectable resources and tools to support other reading comprehension skills.

All plants have parts.



Discussion Questions

- Project the Discussion Cards and have students respond independently, in pairs, in small groups, or as a class. Each card lists the book section most closely related to the question, so refer to the projected book to help students support their responses.
- Use the projectable tools to draw attention to key words and phrases in certain questions that will help students frame their thinking and discussion. Stamp questions that students find difficult to answer for later follow-up and possible research.

After Reading

Reflect on the Reading Strategy

- Go back to the text and have students highlight any areas that pertain to the targeted reading strategy. For example, if the strategy is connect to prior knowledge, invite a volunteer to highlight in the text the material that he or she connected with and then use the text tool to write the personal connection next to the highlighted section.
- Allow students time to complete any printable or projectable worksheets that accompany the lesson. Then have students go through the projectable book to identify passages that helped them complete the worksheet. For example, if students completed a main-idea-and-details graphic organizer, have them go through the book and highlight the main idea in one color and details in another.

Enduring Understanding and Quick Check

- Project these questions from the Nonfiction Book Teacher’s Guide and invite students to respond orally or in writing.

Unit Quiz

- If using an interactive whiteboard and a student response system is accessible, have students answer the questions from the Unit Quiz. Then discuss their responses. For more student involvement, allow each student to generate one new question to use in the assessment.
- Fill in the projectable quiz with the correct answers, or project the answer key. Have students self-grade or peer-grade their quiz using the projected version. Then have them use the stamp tool and write their initials next to their stamp to signify completion of the task.
- Use the cover tool several times to cover up the questions on the quiz. Divide the class into teams. Have a bell available for each team to ring when they are ready to answer a question. Uncover one question and read it aloud. Have students ring in to answer. The group that correctly answers first earns a point. Play continues until all questions are answered. The group earning the most points might receive a reward.



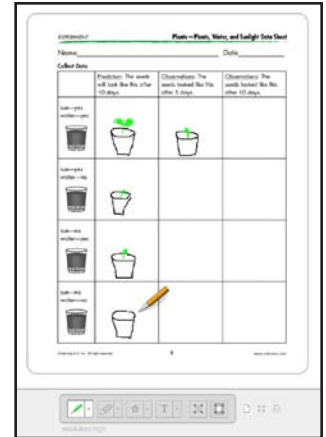
Nonfiction Retelling Rubric

- Project the rubric before students read and discuss the criteria on which they will be assessed. As individual students read, complete the rubric yourself and/or invite each student to use the check-mark stamp to complete the projected rubric as a self-assessment of his or her own reading.

Other Unit Resources

Process Activities

- Display the materials list and procedures in projectable format so students can easily refer to them as they progress through the activity.
- Project the data sheet(s), questions, and conclusions to familiarize students with the objectives beforehand and to collect and analyze data after completing the activity.
- Compile class data from the activity on the projected data sheet(s). Invite students to record answers to the questions and conclusions on the appropriate projected pages by using the pen or text tool, or simply display these pages and have students respond in science journals.



Quick Reads

- Project a Quick Read at a selected reading level for whole-class instruction and reading practice. Use the projectable tools to reinforce reading strategies and comprehension skills, as described in the Projectable Books section above.
- Invite volunteers to answer the projected Brain Check questions.
- Use the text tool to cover the caption of photos and illustrations. Then challenge students to write their own caption for each piece of art.



More Resources

- Have students complete printed graphic organizers and worksheets individually. Then, as a class or in small groups, fill in the projected version of the worksheet by using the text or pen tool. Or, have each small group complete one portion of a projected worksheet. Then, using the text tool, have a member of one group cover its answers. Invite another small group to write its answers in the available space using a different color. Once both groups have completed the activity, move the text box, allowing groups to compare their answers.
- Project the Vocabulary Cards and have students study the terms and their definitions. Then use the text tool to cover a vocabulary term while displaying its definition and challenge students to write-in the hidden term (or vice versa). Students can also use the highlighting and pen tools to classify the vocabulary terms by parts of speech, to divide them into syllables, or to work with the words in other ways.
- When preparing students for a science fair, start by projecting the Science Fair Student Guide and discuss your expectations. Next, project the Science Fair Rubric and explain to students how their work will be evaluated. Consider letting students complete a sample rubric for a mock project by using the projectable tools. Finally, project the Science Fair Project Idea List for the science unit the class is working on, and encourage students to either pick one of these ideas or to choose one of their own.
- Use the projectable resources and tools to support instruction with all other Science A–Z projectable student resources.

Teacher Resources

Science A–Z offers many resources that are intended for the teacher. These resources—such as the Unit Map, Unit Guide, Process Activity Teaching Tips, Science Fair Teacher’s Guide, and Learning A–Z Connections—are also offered as projectables. They can be valuable tools for sharing information about Science A–Z with colleagues, administrators, and parents. For example, projecting the Learning A–Z Connections resource from your current science unit at Open House Night or in staff meetings can help demonstrate how you integrate science and literacy instruction.

The projectable resources can also be valuable for training teachers on the use of Science A–Z. A trainer can project both student and teacher resources and discuss how one might implement them in the classroom. And a district trainer can use these projected resources and tools to train the trainers from individual schools.



Toolbar Tips

- To use the text, framing, and cover tools, begin by clicking on the tool. Next, click on the projected resource, and a box appears. Use the arrows in the corner to reshape and resize the box. Click the “x” in the corner to close the box.
- Clicking on “Reset This Page” will remove all projectable tool displays from the page currently on screen. This action cannot be undone. Doing so will not affect other pages. To reset the entire file, refresh your screen.
- Select “Full Screen Mode” to enlarge the display. Press the escape key or the Full Screen Mode icon to return to the normal display. The text tool only works in normal display mode.
- To preserve a marked-up projected page as a hardcopy, click “Print This Page” and complete the printing process.